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ABSTRACT

The first 3 years of a 4-year project to plan and implement school change using a school improvement strategy in five low income, rural, resource-bound school sites are described in this report. One school from each of the following states--Texas, New Mexico, Oklahoma, Arkansas, and Louisiana--participated in the project. Extreme diversity characterized the schools in terms of population density, minority populations, climate and topography, natural resources, and economies. Quantitative data analysis examined reading, mathematics, and language arts test scores. Qualitative analysis developed contextual indicators, or criteria for improvement, unique to each school. Each school developed its own set of contextual indicators and demonstrated significant changes in school climate. Three schools reported significant improvements in test scores. Findings indicate that two sets of school improvement standards exist: universal ones for student achievement outcomes and those unique to a school's goals and objectives. Recommendations are made for the consideration of the whole school context in assessing school effectiveness and for measuring school improvement in a variety of ways. Four tables are included. (43 references) (LMI)

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Developing Effective Schools: Indicators of Educational Success as Roadmarks to Improvement

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Introduction

Improving the effectiveness of schools in order to increase student performance has been a major goal of school change and improvement efforts. These efforts have escalated as national concern intensifies on the less-than-desirable performance of students currently in the nation's schools. A Nation at Risk (1983) provided an initial impetus for school reform. This mandate for change was followed rapidly by other documents and by increasing legislative action designed to address the problems of unsatisfactorily low student achievement. The Southwest Educational Development Laboratory (SEDL), one of nine federally-funded educational organizations whose missions are school improvement, sought to address these problems with school improvement projects specifically focused on rural populations. In each state of its five-state region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), one school was identified as a demonstration school. Each demonstration school was small, rural, resource-bound, economically disadvantaged and interested in improving achievement scores. These schools varied in size of student body, size and isolation of district, and ethnic/minority populations. One site has primarily black students and one primarily Hispanic, while a third one has 50% Native American population. A fourth site is 60% Navajo and 20% Hispanic, while a fifth is predominately low income white. Two sites volunteered for the project while the other three were drafted, thus creating an added variable of "volunteer status" and "draftee."

This paper summarizes and describes the first three years of a four-year project that focuses on planning and implementing school change utilizing an effective schools/school improvement strategy in the five demonstration schools. The paper

will:

1) Review briefly the research on effective schools and school change that contributed to the formulation of a strategy for school improvement.
2) Describe the data source and the situational factors in each demonstration school and its community: culture/customs, demographics.
3) Review briefly information on educational indicators.
4) Identify indicators of educational success for each school, and correlate each site's identified success factors to student achievement at that site.
5) Finally, the authors discuss the dilemma of judging success in light of schools' needs to be assessed simultaneously against the *universal* standard of standardized student achievement tests, and their own *unique* goals and objectives.

Literature Review

Effective Schools and School Change Research

One of the avenues by which to gain improved achievement has been the engagement of the effective schools research (Edmonds, 1979), one of the most debated and discussed phenomena in education for many years (Edmonds, 1979; Purkey & Smith, 1982). Edmonds and others identified factors that have been found in schools deemed to be effective. These factors and also concepts derived from change research have been used as the basis for planning and implementing school improvement at the five sites. A brief sampling of these two literatures follows.

Effective Schools Factors

The Edmonds formula (1979) for an effective school consists of five "correlates," characteristics or factors that appear to correlate with school effectiveness. The correlates are:

Strong leadership by the principal in instructional matters. Weber (1971) pointed to the instructional leadership of the building principal. Principals in effective schools were seen as having a clear understanding of the school's goals and mission, and knowing what good instruction looks like in order to develop or enhance effective teaching practices in their teachers. Other researchers (Armour, et al., 1976; Berman & McLaughlin, 1978; Brookover & Lezotte, 1979; Venezky & Winfield, 1979) provided descriptions of the behaviors of principals who are instructional leaders, such as: developing and implementing plans for curriculum and instruction, and expressing high expectaions for teachers, students and themselves.

Systematic evaluation and monitoring of student progress. Effective schools monitor and measure student performance with a variety of assessment procedures. Principals and teachers look not only at aggregated test data, but also at a disaggregated analysis to make sure that all groups of students are doing well. Tests are analyzed to determine individual as well as group progress or problems, and this analysis feeds directly into instructional planning. Monitoring academic progress in terms of student achievement, student conduct, and student activities, for instance, are important to school effectiveness as revealed by Rutter, et al. (1979), Levine and Stark (1981), and Weber (1971).

An orderly learning environment. A safe orderly environment means more than a school that is clean and free from safety hazards, although these two important characterisitics are part of an effective school. Teachers and students feel that school is a good place to come every day and the school runs smoothly. Discipline is handled consistently and equitably, and the staff develops warm and positive relationships with students and each other. The overall climate reflects that this school is a good place to be, a place that is organized without being stifling, a place that is friendly but firm, a place where teachers and students can achieve. Such factors were

identified in studies by the New York State Department of Education (1974) and Brookover, Beady, et al. (1979).

A clear and pervasive focus on instruction. An effective school has a clear instructional focus. The mission of the school is instruction, and the daily schedule reflects this; resources and activities are directed toward instruction. There is a clear, comprehensive written curriculum which is part of every teacher's planning for instruction. Parents and community members are aware that the purpose of the school is instruction when hallway display cases contain samples of academic work as well as sports trophies. Studies by Brookover and Lezotte (1979), Trismen, Waller, and Wilder (1976), and others make these points.

High expectations for student achievement. Another correlate is evidence of high expectations for student achievement. The word "expectations" is highly related to observable teacher behavior toward students: providing all students with appropriate questions and prompts, allowing adequate time for responses, showing respect to all students. Teachers and administrators establish clear rules of conduct and apply them consistently with all students. High expectations are consistently identified as a factor in effective schools (Rutter, et al., 1979; Brookover & Lezotte, 1979; Levine & Stark, 1981).

These five correlates comprise the factors identified by Edmonds as contributing to effectiveness. Another factor that has received much attention in schools that are realizing their goals is that of parental involvement, and the SEDL strategy included this item for consideration by the demonstration schools.

Support of the school by parents and community. Parent involvement undergirds the school. An effective school mobilizes parents to become involved (this may mean holding parenting classes or it may mean improving the frequency and the quality of communications which are sent home). Research has shown a wide array of

ways in which parents may be involved in schools (Chavkin & Williams, 1985). Sometimes this involvement may mean a parent tutoring program for students; it may mean parent volunteers working in the library. It may mean that parents come to speak to classes about career needs, or how they use geometry.

These six characteristics of effective schools were the focus of staff development that enabled the school staffs to assess their presence or absence in their schools, and use such data for developing their school improvement plans.

School Change Research

Every culture builds on certain concepts, principles, or values that are fundamental to the individuals as a group within it, be it a school, a native tribe, or a large nation. These values are the sacrosanct entities that underlie all actions by the individuals and consideration of actions; they hold the whole "fabric" of the school or institution together. The concept of change, inextricably linked with the idea of progress, is seen as one of these values in education: as an almost automatic good, equating continual change with a seemingly inenviable progression toward perfection. These assumptions have been operant in the policy area of education, if not so frequent at the level of classroom practice.

How, then, to transplant valuing and implementation of change to the classroom, so that improvement ensues? Research provides some illumination, thus, selections from the knowledge base on change follow.

Hersey and Blanchard (1982) identified four kinds of educational change: change in 1) knowledge, 2) attitude, 3) behavior, and 4) group performance. Change becomes more time-consuming and energy-demanding, moving from 1) to 4). It is clear that knowledge, while it is necessary, is not sufficient to bring about behavior or performance change, although there continues to be an assumption that if information is just provided, then people (teachers) will understand the benefits and change their

behavior. History has proven this untrue.

Change is more likely to be successful when input is accessed from those who will be involved (Guskey, 1986; Lieberman & Miller, 1986). Further, when there is a need to which people can relate the change, change is more likely to occur (Jacullo-Noto, 1986). This axiom was proven at the demonstration schools as teachers learned to study and interpret data, and identify and prioritze needs.

Too much change tends to be disruptive, therefore, there should be an adequate degree of stability to counter balance the impact of change, with a provision of stability and emotional reassurance (Ortiz, 1986). The leadership supporting change needs to be nurturing and supportive of those implementing change, thus leadership must contribute to and maintain a level of stability at the same time they are exercising intitiative for change. As Huberman and Miles (1986) reveal, "administrative decisiveness bordering on coercion, but intelligently and supportively exercised, may be the surest path to significant school improvement," (p. 70). The balance of pressure (initiating change, decisiveness) and support at the administrative leadership level is a delicate but necessary condition for effective change.

As an organizational dynamic, change is a process and is highly individualized and based on personal experience (Hall & Hord, 1987). The process is one of developmental growth, and highly in need of facilitator focus on individual needs. Hall and Hord's research-based model provides for this perspective on the individual and the model's strategies address the inherent stresses in the change process. Consideration is given to the individual's personal reactions, the programmatic adjustments made by the individuals, their actual in-practice behaviors, and procedures employed by change facilitiators to support the process. The model's strengths are its client centeredness, addressment of individual concerns, stress on effective intervention by facilitators, maximization of effect, and minimization of

frustrations.

Fullan (1985) also stresses the importance of a facilitator to assist the school in the implementation process. In addition, Fullan emphasizes the need to allocate sufficient resources (money and time), develop the principal's leadership role, provide ongoing staff development and assistance, and summarily, review the school's developing capacity to change - as the latter is an over-riding and essential goal of the efforts.

Obviously these modest selections from the results of studies of change represent only a small percentage of that knowledge base. To varying degrees, the notions provided by these researchers and others were incorporated into the planning implementation of change at the demonstration sites.

Educational Indicator Systems

Educational indicators are defined as a single or composite statistics reflecting the health of the educational system, that can be readily, reliably, and repeatedly obtained, thus permitting comparisons over time and among states or districts (Johnstone, 1981; Kaagan & Smith, 1985; National Center for Educational Statistics, 1985). An indicator system is a framework into which any number of indicators are placed for review and analysis, leading to modification of policy and practice (Kaagan & Coley, 1988). The value of an indicator is in its ability to demonstrate change over time, the relationship of performance of one school district to another, and how the condition it measures compares with societal needs or expectations (Kaagan & Coley, 1988). Oakes (1989) has suggested that the very existence of indicators influence how schools perform. Indicators have been suggested as guides for educational improvement and as a measure of accountability. This paper focuses on the use of indicators as guides for school improvement at the district level.

Interestingly, indicators have been justified throughout our nation's history, not

only as a mechanism for reflecting the nature of educational problems, but as an instrument of educational reform (Shavelson, McDonnell & Oakes, 1989). The Common School Movement is an example of an early indicator system (Travers, 1983) in which indicators served as justification for the establishment of the U.S. Department of Education in 1867 (Warren, 1974). The indicator movement in 1867 was in response to problems in our nation's schools at that time much like the indicator movement of today.

The current interest in educational indicators has developed rapidly over the past five years as local, state, and national agencies have been under pressure from the public to improve the quality of education. The national level of concern has been characterized by the nation's growing concern about literacy and the future ability of U.S. students to compete in the world arena. Indicators are also seen as one way to meet the needs of state and federal policymakers for comparative data on the quality of education in the U.S. (David, 1987).

Indicators gained national recognition in November, 1984, when the Council of Chief State School Officers initiated a policy to establish a national system of standardized indicators; the council has since created a center to implement their policy (Kaagan & Smith, 1985; Smith, 1988). The U.S. Department of Education, The National Science Foundation, and the Council of Chief State School Officers gather and report cross-sectional or longitudinal information about student achievement and educational conditions in a representative sample of schools. This information can be used to draw conclusions about schools on a national basis. Federal agencies believe that indicators are essential for monitoring the status of the nation's educational system and for tracking how it changes over time. Unfortunately this information has not been designed to provide information to an individual state or district indicator system.

Many individual states are using statewide indicators to assess school improvement and the impact of educational reforms (Seldon, 1987, 1988). State level agencies believe that indicators provide information that can be used to hold local districts and schools accountable for their performance and provide data that can inform new improvement efforts (Oakes, 1989). Some states have developed indicator systems for evaluating and comparing local districts within the state; individual districts too are developing their own sets of indicators to measure their effectiveness and efficiency with school and district specific indicators (David, 1988). The state and local level agencies have concerned themselves with such issues as monitoring policies, teacher certification, dropout rates, student achievement and increased academic requirements for graduation. These concerns will require a much more sophisticated measure of the processes and outcomes of schooling.

It has become evident that to date a comprehensive indicator system is not in place to measure the outcomes of our educational systems. The difficulties in creating such a system are very complex including the need for common definitions, measures that match and adequately reflect education goals, and methods for insuring fairness of comparisons across different populations (National Center for Educational Statistics, 1985; Oakes, 1986). What we do have are instead many attempts across the nation to develop general indicator systems along with state and local indicator systems.

Why the sudden attention to indicator systems? Why the interest in developing a comprehensive set of national, state and local indicators? One explanation might be that if a comprehensive indicator system were available, policymakers could determine the nature of current and emerging problems, evaluate the factors influencing educational trends, monitor the effects of policy, and identify steps that might be taken to improve student performance (Shavelson, McDonnel & Oakes,

1989). As educational reforms are implemented, the indicator system could assess their contribution to better schooling (Oakes, 1986). Changes within the system for the betterment of the school could then be based on indicators that are tied to specific schooling processes along with the analysis of data relevant to future policy issues.

Project and Regional Overview

The goal of the Theme D project entitled, "Improving School and Classroom Productivity," was to develop strategies for school improvement based on an R & D school improvement process in five low income, rural, resource bound, demonstration sites. These demonstration schools, one in each of the five states served by Southwest Educational Development Laboratory, were selected on the factors mentioned above.

Project Description

In these five multi-year projects, the activities and events related to site selection, negotiation for work at the site, planning for the school improvment project, and implementation of campus imrovement plans have been documented by a specified SEDL/liaison/external assister/change facilitator responsible for spearheading each school's improvement process. The participant observer made regular monthly on-site visits, conducted and attended school planning meetings, solicited feedback from teachers and administrators and made regular weekly telephone contacts with a wide variety of school and district personnel. A representative from each schools' state department of education, who served as a partner in the schools' improvement effort, provided additional information and assistance in each project's efforts.

The effective schools research, school improvement process and school change research mentioned previously served as a knowledge base for all involved in the Theme D effort. Extensive training was provided to each of the sites in these areas

along with extensive on site leadership development. This leadership development was in the form of: training; modeling and coaching; developing short and long range plans; networking; and other professional development acitivites. The leadership training was targeted not only at the superintendent, principal and key central office staff but at master teachers and teacher leadership teams.

Overall project indicators were developed by SEDL at the onset of the project. These indicators were to serve only as a guide for the project with the expectation that each site would develop its own site specific indicators from these general guideline indicators. These general project indicators are as follows:

System Indicators:

1. Evidence that tests are being used for diagnosis as well as measurement.
2. Opportunity for teachers to collaborate exists within the system.
3. Partners and other agencies and individuals are being regularly accessed as resources.
4. Schedules reflect knowledge of research on time on task.

Client Group Indicators:

1. Evidence that student achievement is rising.
2. Evidence that teachers understand and use research-based information on effective schools, effective teaching and change processes.
3. Evidence that the staff are assuming leadership roles both inside and outside the school.
4. Evidence that the principal is serving as an instructional leader.

Decisionmaking Indicators:

1. Decisions specific to each sites' distinctive needs are being made by people who will need to implement the decisions.
2. Decisionmaking is data-based.

3. Decisionmaking is grounded in instructional/learner needs.

4. Decisionmaking group meets regularly to analyze data and make instructional decisions based on this data.

Since comparison data are not available, the above project indicators served as one way, not the only way to access educational reform typified by the entry conditions described previously.

Demographics of the Region

It is important to understand the vastness and the extremes in the region served by SEDL to fully understand the context in which this study took place. Each site brings to the study its own uniqueness which is directly influenced by its state demographics and state educational context.

The five states of the Southwest region comprise an area of great diversity. In landscape and climate, in people and cultures, in population density, and in natural resources and economies. The region includes: topography ranging from deserts to semitropical coastlines; some of the nation's most densely populated and most rural areas; some of the nation's richest and poorest counties and schools; some of the nation's highest and lowest percentages of Black, Hispanic and American Indian students in public schools; and some of the highest percentages of public school students classified as limited-English proficient (Vaughan, et al., 1989).

The region's schools enroll more than five million students from kindergarten through the twelfth grade. Texas has approximately 65% of the total population and public school enrollment in the region. New Mexico, with more than a fifth of the region's land area accounts for only five percent of the region's population and school enrollment. Louisiana is the most densely populated state in the region and has nine times as many people per square mile as New Mexico. Arkansas is the most rural state in the region with 48% of its residents living in rural areas; Oklahoma has 33% of

it's population in rural areas (Vaughan, 1989).

The five states have significant minority populations. New Mexico and Texas have high proportions of Hispanic residents. Oklahoma and New Mexico have high proportions of American Indian residents including Apache, Cherokee, Comanche, Pawnee, Navajo, Pueblo, and Zuni. Arkansas, Louisiana and Texas have relatively high percentages of black populations. Texas also has a growing Asian-American population (Vaughan, 1989).

Public Education

Beginning in the early 1980's the states in the region initiated a wide range of educational reforms and school improvement efforts and incentives. These included: mandated teacher and administrator appraisal processes; career ladder programs; no-pass no-play requirements; curricular mandates for basic skill instruction; remediation programs for districts whose students perform poorly on standardized tests; district accountability measures and progress reports; consolidation regulations and statewide effective school projects.

Arkansas. Just over 40% of the population in the state of Arkansas live in rural places with fewer than 2500 inhabitants. There are centers of rapid growth near Little Rock and in the retirement communities close to the Ozarks and Hot Springs National Park. Of the 329 independent school districts in Arkansas, at least three-fifths are designated as rural or mostly rural. About two-thirds of the districts enroll less than 1000 students (Vaughan, 1989).

An ambitious education reform agenda has focused most strongly on: increased standards for curriculum and staff certification; formal accountability through annual accreditation; teacher and student competency testing; and increased school attendance and parent involvement. There are also mandates for consolidation of school districts that fail to meet or maintain accreditation and certification standards.

Early studies indicate improvement in education and observers are positive about the overall results (Center for Research and Public Policy, 1988; Root, 1989).

Louisiana. Louisiana has approximately 4.4 million people, with 800,000 students in the public schools. Laws are derived from the Napoleonic Code and the counties are called parishes. Louisiana schools are orgaized into 64 parishes, the smallest having 1500 students. Three urban parishes (Orleans, East Baton Rouge, and Caddo) plus suburban Jefferson Parish enroll more than 20% of the public school students (Vaughan, 1989).

During the 1988 Legislative session, the Children First Reform Legislation was signed into law representing a serious commitment to improving the quality of education in Louisiana. The act proscribes the development of a performance-based teacher appraisal system, a data collection system for educational indicators, and a reorganized system of intermediate regional service centers. The law requires extensive consultation with administrative and stakeholder groups in the design and implementation of the teacher appraisal and indicator systems (Market Research and Issues Management, Inc., 1989; Louisiana Department of Education, Office of Reform Coordination: Management and Oversight, 1989).

New Mexico. When New Mexico was admitted to full statehood, its first state constitution made bilingualism official in the legislature and in the schools. People of Spanish origin are approximately 35% of the population and American Indian are approximately 8%. There are currently 88 school districts in the state varying from 60 to 79,850 students. Of these, 32 districts enroll fewer than 500 students.

New Mexico has adopted a number of reform initiatives but the provisions have been phased in over a period of tme rather than in reform initiative. These reform elements include student performance standards, class size restrictions and new curriculum requirements. The state agency also encourages local schools in rural

areas to form voluntary networks for planning staff development and school improvement. The educational reform actions have increased expectations for students and districts.

Oklahoma. Oklahoma is primarily a rural state, with only three metropolitan areas, Tulsa, Oklahoma City and Lawton. The rest of the state includes small towns and villages. There are 611 school districts. Approximately three-fourths have less than 1000 average daily attendance. Thirty-eight percent of the districts enroll less than 250 students.

The "Oklahoma 2000 Education Challenge Act" was passed by the 1989 Legislature and included a variety of measures designed to improve the quality of education in the school system. The act requires the State Board of Education to establish an Oklahoma Educational Indicators Program to assess and report the performance of public schools and school districts. Indicators of progress will be developed for all grades and applied so that educators, students, parents and communities will receive information about school performance (Oklahoma State Senate, 1989 regular session; Oklahoma Educator, 1989).

Texas. Texas' land mass, population, and number of school districts present a diverse school population. Texas is growing in size and heterogeneity and has a projected school population of approximately 3.5 million students and increasing proportions of ethnic and racial minorities. There are 1063 school districts in Texas, although the largest eight districts enroll 20% of the state's total enrollment. In 1988, the state government spent $12.85 billion on public schools - kindergarten through twelfth grade (Blackstone, 1989; Vaughan, 1989).

The Long-Range Plan for Texas Public School Education was mandated by House Bill 72, the education reform legislation enacted by the 68th Texas Legislature. The goals are related to: student performance, curriculum, teachers and teaching,

organization and management, finance, parent and community involvement, innovation and communication. A variety of programs were designed to ensure the successful implementation of education goals (Texas Education Agency, 1987).

Description of Demonstration School Sites

School A is located in a small town of approximately 4200 people which exemplifies small town America. The main agricultural crops are rice, cotton, and soybeans. In recent years fish farming has become a major source of income with over 20,000 acres devoted to fish being raised locally each year. Local retailing business offers other employment opportunities while many residents commute daily to jobs in a major city 30 minutes away.

Four schools make up School A's district (student population 1780); a high school (351); a junior high school, grades 7-9 (433); an elementary school, grades 4-6 (426); and a primary school for kindergarten through third grade (570). The laboratory project was involved directly with only the elementary and primary schools. The student population is 75 percent white and 25 percent black. Approximately 53 percent of the students are transported. About 40 percent of the students are eligiible for free or reduced lunches. The staff of 100 plus certified teachers is very stable with little turnover and a majority of the teachers living within the district and community.

School B is located in a town of about 23,000 residents which borders an indian reservation. The major business is trading indian art. The town has an extension of the university, many restaurants, hotels, and shops catering to the tourism trade, and various federal service agencies for the Native Americans.

The school district covers the largest of the five studied, covering a vast area spread over rough, sparsely populated terrain. The district serves 13,000 students in their 27 schools. There are 17 elementary schools (eight are in town while the remaining nine are out of town, some as far away as 56 miles) and four middle

schools, two in town and two out of town. Only one of the high schools is in town with five located out of the town.

The district's student population is 68% Native American, 16% Hispanic, and 16% white. School B's population is 58% Native American, 21% Hispanic , and 21% Anglo. It is one of the in-town schools, but does have students that are living outside the town boundaries.

School C is located in a small village of 450 people. There is a limited economic base, with two handy stop grocery /gasoline pump businesses and a package store. Peanut farming has been the agricultural producer in the area of gently rolling hills. There are three churches in the town.

There are two schools in the district: elementary, grades k-6 (120 students) and secondary, grades 7-12 (110) students. The student population includes Anglos, and Chickasaw and Choctaw Native Americans. Over half of the children come from single parent families. Many of the students participate in a breakfast program with 60% of the children also participating in the free or reduced lunch program.

School D is located in a community of approximately 6,000 and is located in one of the poorest districts in the five state region. The economic base is limited with approximately a dozen businesses (restaurant, florist, hardware store, etc.) comprising the small "downtown area." Dairy farming has been the leading agricultural producer in the area for many years along with the timber industry.

At this time there are three schools in the district: elementary, grades PreK-4 (800 students); middle school, grades 5-8 (630 students); and a high school (440 students). The student population is primarily black. 80% of the children are on free or reduced lunch programs with many students also participating in the breakfast program. A large majority of the students ride buses to isolated areas of the district. The school district employs 275 people.

School E is located in a very small town of about 1,000 residents of which the majority are Hispanic (95%) located very close to the U.S./Mexican border. Businesses include a video tape store, a trading post, a quick snack shop that has recently expanded to include a cafe, and a modern cotton gin.

The school district has approximately 400 students. There are two schools: the elementary school (grades K-6) housed in an old building and the high school (grades 7-12) which is housed in a modern twenty year old building. The student population reflects that of the community (95% Hispanic). Most students (70%) are Spanish speaking with limited English proficiency.

Results of the Study

Data Analysis

Data analysis in this paper includes quantitative information which includes test score information in reading, mathematics and language arts, and qualitative contextual indicator information. For some schools, achievement was analyzed on both norm referenced and criterion referenced tests when both types of test information were available.

A series of tables report the data. Not all schools (D & E) reported test data due to particular circumstances at these sites (this information is expected late spring). One school (C) reported only aggregate school data on a norm referenced test. Each table varies depending on which norm referenced test was reported and at which grade levels the test was given. Each table presents the grade level for which the data are reported, the baseline data (86-87), the current results data (88-89) and the gain or loss between baseline data and current results data.

School A

Norm Referenced Test

*Math**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
1	70	71	+1	
2	67	82	+15	
4	67	72	+5	
5	63	74	+11	

* Reported in percentile scores

Norm Referenced Test

*Language**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
1	61	74	+13	
2	63	72	+9	
4	56	61	+5	
5	57	58	+1	

*Reported in percentile scores

Norm Referenced Test

*Reading**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
1	66	74	+8	
2	54	58	+4	
4	56	54		-2
5	57	56		-1

It is clear that in School A significant gains were found in math and language in grades one, two, four and five on the norm referenced test. Impressive gains in first and second grade language scores are of importance. Significant gains were found in first and second grade reading scores. A loss of up to two percentile points was found in fourth and fifth grade reading scores. In most instances, the improved performance increase was signficant- as high as fifteen percentile points.

School B

Norm Referenced Test

*Math**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
K	47	53	+6 (13%)	
1	48	66	+18(38%)	
2	48	59	+11(23%)	
3	46	49	+3 (7%)	
4	59	65	+6 (10%)	
5	45	53	+8 (18%)	

* Reported in NCE Scores

(continued)

Norm Referenced Test

*Language**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
K				
1	51	61	+10(20%)	
2	46	57	+11(24%)	
3	46	51	+5 (11%)	
4	57	55		-2(%4)
5	45	49	+4 (8%)	

*Reported in NCE Scores

Norm Referenced Test

*Reading**	86 - 87	88 - 89		
Grade Level	Baseline Data	Results Data	Gain	Loss
K	45	52	+7 (15%)	
1	45	59	+14(31%)	
2	45	57	+12(21%)	
3	44	50	+6(14%)	
4	50	53	+3(6%)	
5	50	53	+5(11%)	

* Reported in NCE Scores

It is clear that student achievement increased in reading, language arts and math at all grade levels except in the fourth grade language scores (-2 NCE). The most dramatic gains were seen in the first and second grade scores. Here total aggregate gains in reading, language and math averaged a 26% increase across the three year period of time. The improved performance increase was significant in most cases - as high as 18 NCE points. Criterion referenced test information was not available for School B.

School C

Norm Referenced Test

*Total School**	86 - 87	88 - 89		
Subject	Baseline Data	Results Data	Gain	Loss
Reading	44	57	+57	
Language	41	43	+2	
Math	45	85	+40	

* Reported in percentile scores

School C reported aggregate test results for the total school on a norm referenced test. Total school student achievement increased significantly in reading and language and most dramatically in math (+40 percentile points).

In conclusion, where quantitative data (test results) are available in schools A, B and C, significant increases in reading, math and language arts were found. The reader should consider that two of the schools (A & C) used the same norm referenced test while School B used a different norm referenced test. Comparisons between sites is difficult because of this difference, coupled with many other site specific differences (school size, input resource variables).

Contextual Indicators

One goal of a comprehensive indicator system is to develop and provide different types of measures of student achievement and school success. The state of the art in measurement and evaluation has grown extensively in recent years. However, measurement technology and the art of assessment are still in their infancy. Sometimes what needs to be measured cannot be done due to the lack of a proper traditional measurement tool. This has many implications for measuring school improvement efforts.

To compound the problem, schools develop multiple goals and objectives and then measure the multiple goals with a single set of outcome measures (Oakes, 1989). The goal of a comprehensive indicator system should be that of developing different measures of school success to then drive the school improvement efforts.

Oakes (1989) has suggested context indicators as one way of capturing the total picture of school performance. Context indicators provide information about the central features of the educational system (Oakes, 1989) such as resource levels, policies, administrative suppport and focus on academics. Policy makers and educators are concerned with issues in the school such as school climate, parental involvement, time on task, quality of resources, instructional focus and school leadership along with the common outcome indicator of student achievement. The former is more difficult to measure and describe but no less important. The above mentioned contextual indicators are referred to by Oakes (1989) as enabling indicators: they facilitate or enable learning to take place in the school.

Context indicators also enable the dissaggregation data by subgroups that have had like experiences in school (Oakes, 1989). A complete view of must be in place to fully understand the outcome indicators and to then decide on areas needed for improvement. That is, one must consider input indicators, process indicators and

output indicators within the realm of contextual indicators to completely grasp the total picture of a particular educational setting. By using test-score indicators with equally balanced and respected context indicators, a complete picture of school effectiveness can be achieved.

Demonstration School Development of Contextual Indicators

The development of contextual indicators poses a dilemma. For schools to decide on what to include in their indicator system, they must first understand what qualities of teaching are most needed for successful learning and what characteristics make the school "effective." SEDL provided to each of the five schools training and on-going staff development in the following related areas: effective schools research; school improvement process; school effect/effective teaching practices; team building; parental involvement; indicators; and other related topics such as communication, behavior management, test taking strategies, at-risk issues, time on task, expectations and homework. Extensive training in leadership both on and off site was provided to administrators and teacher leaders. This information and training provided a common knowledge base for the five schools.

In addition to the training and staff development, SEDL provided continual assistance to the districts in the form of an external change facilitator/site liaison. This person provided continual guidance and support to the district in developing: short and long term goals; action plans; site specific strategies for school improvement; and site based indicators of success. More importantly, this change facilitator developed, over time, a vision with the school of what the "ideal" school situation would be for their particular site. This was the initial step, and a most important step, in the development of site indicators - the clear vision. The schools then outlined their vision in relationship to their school area of focus for improvement. Given the diversity of the schools, the focus areas were just as diverse ranging from writing/technology/critical

thinking skills to school climate to reading instruction to at-risk and slow learner strategies. Indicators were developed individually with each site with the site change facilitator. These site indicators were then categorized by the change facilitator and a representative from the particular school site under the Oakes (1989) construct of the following enabling contextual indicators: access to knowledge; press for achievement; and school professional conditions. The following is a brief review of contextual indicators. These indicators represent changes in each site that have occured over the last three years as a result of the improvement effort

School A: Focus Area - At-Risk, Special Needs Populations

Access to Knowledge

1. Resource teachers are used as specialists to provide information to regular teachers concerning mainstreaming special needs children.
2. Teachers have received training in coooperative learning and have utilized heterogeneous groupings throughout most of the school for all students.
3. Academic support system for all students is available. Homework Centers and peer tutoring are available for all students.
4. Parents work as instructional aides in the classroom.
5. A 30 minute planning period each morning is available to all teachers to meet and plan together.
6. Faculty is focused on the effective use of instructional time.
7. Availability of instructional materials along with computer laboratories increase.
8. Teachers receive extra monies for instructional use due to their own creative grant writing.
9. Adoption and institution of a new reading program K-2.

Press for Achievement

1. Entire staff emphasis is on student achievement and this is communicated throughout the school and community.
2. School recognizes academic accomplishments on a regular basis.
3. All students are expected to pass the state basic skills tests.
4. New ideas are encouraged by the administrative staff.
5. Implementation of new instructional strategies is supported by the administrative staff.

Professional Conditions

1. Release time is provided for professional interactions on a regular basis.
2. Leadership teams meet on a regular basis. Effective School correlate committees meet regularly and involve all members of the faculty in the planning process.
3. School-wide decisionmaking concerning specific at-risk students is evident in the Teacher Effectiveness Teams, organized to address individual at-risk student problems.
4. Data is reviewed annually. Planning for the next school year is based on data driven information.

School B: Focus Area: Writing/Technology/Critical Thinking

Access to Knowledge

1. Teachers within the school have received training in the focus areas and now serve as "experts" to other faculty members both within the school and within the district.
2. Innovative programs have expanded to encompass the focus areas: process writing; peer editing; Writing to Read; critical thinking programs.
3. There is mobility from one ability group to another. School is moving from

ability grouping to mixed grouping.

4. The computer lab is available to all students on a regular basis. The computer committee is forming a computer curriculum.

Press for Achievement

1. Academics are emphasized which is evidenced by the staff's increased knowledge in specific areas (writing, technology, critical thinking).

2. A majority of the students participate in classes stressing critical thinking skills.

3. Academic excellence is recognized regularly by specific awards for excellence and improvement.

4. Praise is given from the "front-line administrator" to the teachers for implementing challenging curriculum into their classes.

5. People are brought into the district from neighboring districts to visit the school. The school is used as a model of instruction for others to follow.

Professional Conditions

1. Class size has been reduced.

2. Committees meet on a regular basis.

3. Internal Affairs Commitee has evolved to become a school decision making entity.

4. Teachers have moved from approximately 10% to now 50% believing that they can make a difference with each student.

5. Teachers who are taking risks (trying new things) are receiving school recognition.

6. A significant number of parents have communicated to the school that their students look forward to each school day.

School C: Focus Area: Reading

Access to Knowledge

1. Chapter I teachers moved from a reading focus to a language arts focus.
2. Institution of a new reading program.
3. Development of a student retention policy.
4. Development of an elementary library.
5. Institution of a remedial summer school program.
6. Parental involvement evolved from virtually nonexistence to being a major component in the school.

Press for Achievement

1. The entire staff is focused on academic achievement from the superintendent, who provides rewards and incentives for excellence, to the teaching staff.
2. School-wide incentive programs for reading accomplishments are provided.
3. The superintendent is involved directly with teachers in exploring new instructional programs.
4. Teachers developed a homework policy, submitted it to the administration and the School Board for ratification and adoption as policy.

Professional Conditions

1. Departmentalization is replaced by self contained classes as the organizational structure.
2. Administrator teaches a class so planning period remains intact for all teachers.
3. Significant amount of time is devoted to planning, collaboration and collegial planning.

4. Teachers acquired a new view of themselves as a "can do" professional.

5. Administrative support for teachers' noninstructional tasks has increased significantly.

School D: Focus Area: School Climate

Access to Knowledge

1. Coordinating teachers assist other teachers with instructional issues.

2. Course offerings increase at the secondary level.

3. A computer lab is made available through a special grant.

4. Parents become involved in the school by: involvement in the school wide testing program; fund raising monies for specific school projects; and aiding instruction in the classroom.

5. Staff believes that all children can learn and that they will do the best they can with what they have where they are.

Press for Achievement

1. Administrative support by the superintendent and certain administrators provides the impetus for teachers to examine new programs.

2. Homework policy instituted district-wide.

3. Honor students are recognized district-wide.

Professional Conditions

1. Teachers at all schools meet monthly in leadership teams to plan for school improvement.

2. All schools have a new support - a full time school secretary.

School E: Focus Area: Climate

Access to Knowledge

1. Two technical teachers to address language defiiciencies added to the faculty.

2. Instructional time increased proportionally to the day.

3. A language enrichment program added for ESL students.

4. Primary limited English proficiency students placed with a bilingual teacher.

5. Computers purchased and made available to supplement instruction.

6. A local retailer with a reading incentive program provides an incentive for qualifying students.

7. Parent volunteers recruited, trained and used throughout the school.

8. School communicates with the parents through a monthly newsletter.

9. District band teacher and band program added, with uniforms provided.

Press for Achievement

1. School-wide intensive preparation for state mandated test.

2. Satellite classes in Trigonometry and French along with language enrichment classes are a part of the course offerings.

3. Honor students are recognized.

4. Administration orders materials for programs in a timely manner.

Professional Conditions

1. Teacher input provided concerning a reward change caused by budget adjustment.

2. Teacher release time provided for inservice activities.

3. A significant amount of time is spent in planning for school improvement.

4. Teacher input provided concerning utilization of computers.

Discussion of Contextual Indicators

School A

School A developed an elaborate instructional system to address the needs of students who were not experiencing success in school. These included mainstreamed special education, slow learner and at-risk populations. Of special

concern to School A was the reading level and language development of these populations and the entire K-2 student population. The initiation of the new reading program (School A/Access Indicator #9) has been suggested as one contributing factor in improving reading and language scores grades K-2. Special assistance given to regular educators from special ecucators, cooperative learning, inservice traiing and academic support systems have been identified by the school faculty as an enabling factor in the general overall rise in test scores demonstrated on the norm referenced test. The improved school climate has been attributed to Press for Achievement indicators one through five. Teachers feel that all students will learn in their school because the necessary supports are now instituted into the school (examples: Teacher Effectiveness Team, Leadership Teams, annual data review process).

School B

School B focused its attention on the areas of writing, critical thinking and technology. Impressive gains on the norm referenced test were demonstrated in K-2 scores in reading, language and math. The school attributes these gains in part to the extensive use of the computer lab in teaching the fundamentals of reading, writing and language to the lower elementary aged students. Gains are less impressive in math, reading and language at the upper elementary level (grades 4-5). This has occured, they believe, because these students have not had the full benefit of the computer lab which focuses on reading, writing and language skills. The math gains demonstrated by the fourth and fifth grade students are in fact slightly higher than their language and reading gains. School B reports that a majority of teachers believe that all students are capable of learning higher level thinking skills and have incorporated this discipline into the whole curriculum. Of significance is the fact that teachers are now "taking risks" and "trying new things" and are being rewarded for their risk taking. The

School B adminsitrator feels that this risk taking and experimentation has changed the climate of the school significantly.

School C

Although School C reported only school-wide aggregate test scores on the norm referenced tests, a number of hypotheses can be made between the test scores and the contextual indicators.

Significant gains were demonstrated in reading and math scores across the school. School C attributes this dramatic rise in scores to adoption of a new reading program K-2; instructional focus of staff and adminstration; staff change in the math department; and the institutionalization of a homework policy.

School D

School D has undergone an extensive district-wide reorganization which has had both negative and positive results on school improvement. A concern during the reorganization was that of school climate, teacher morale and school resources. Test scores from the reorganized district are not available until late spring. More importantly, although this district has experienced trauma, they have emerged with a new sense of focus and purpose. When examining School D's contextual indicators over the past three years, it is evident that significant changes have occured which are difficult to measure in the conventional manner.

The lack of resources at School D has been a major concern throughout the project. School D has tried to remedy this problem by utilizing parents as a resource, applying for grants to supplement existing programs and by reorganizing the district. The reorganization of the district can be viewed as a general contextual indicator for School D since it impacted policymaking and decisionmaking in the district to a large degree.

School E

School E also has undergone trauma related to a different type of school reorganization and has been impacted by this experience. As stated before, School E's test data will be reported in late spring and will be available in the final report in July 1990.

School E also chose school climate as a focus area due again in part to site specific situations and went about building school climate in many unique ways. The current superintendent played a major role in addressing the climate issues by: opening the lines of communication between the school and community; involving local businesses and parents as school partners; expanding the curriculum offerings; and rewarding faculty and students for excellence. Again, test information, now missing, may not reflect the dramatic changes in School E.

Implications for Future Study

Schools striving for increased effectiveness have needs for improvement that are simultaneously universal and unique. The school effects research has identified a set of variables that appear to be typically present in schools that are exceeding expectations in student success. At the same time, the school culture, context, and other factors demand attention to each school's particularistic needs - thus, "unique" needs. While student achievement outcomes are a universal standard against which to judge success or effectiveness, additional standards derive from each school's unique goals and objectives. How to accommodate these two sets of standards or indicators of educational success has been the focus of this paper.

The results of this study, still in progress, are very encouraging. Data gathered on indicators of educational success from this project demonstrate that school improvement can be measured in a variety of ways that address individual school needs and reflect appropriately their specific gains, even under less than ideal

schooling conditions, with different levels of success. Some of these indicators include: the frequency of teachers' interactions about instruction; parental involvement activities in schools; increase in communication of teacher/teacher, administrator/teacher, teacher/parent, etc.; teacher-initiated policy development and implementation.

Schools are complex social institutions that require multiple assessment criteria. Unfortunately, the most easily measured and categorized school information are most likely to be the least useful. The most important attributes of an effective school environment is in most cases the most difficult to measure in isolation. School improvement adds up to more than increased student achievement on standardized tests, though that is an undeniable primary goal; improving the school means many more things to each constituency involved. The whole school context must be continually be considered when assessing school achievement or school effectiveness.

The question of what school characteristics are most important to assess as indicators is of the utmost importance. There is limited evidence concerning certain school characteristics and preferred outcome behaviors. Research is needed in the area of what to measure as school characteristics for indicators. Different characteristics within different schools produce different effects. More study is needed in this area to fully understand the complexities of the "whole school culture" and its interplay with achievement.

Bibliography

Armor, D. J., Conry-Oseguera, P., Cox, M., King, N., McConnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). Analysis of the Schools Preferred Reading Program in selected Los Angeles minority schools. (Report No. R-2007-LAUSD). Santa Monica, CA: RAND. (Eric Document Reproduction Service No. ED 130-243).

Berman, P., & McLaughlin, M. W. (1978). Federal programs supporting educational change, Vol. VIII: Implementing and sustaining innovations. Santa Monica, CA: RAND.

Blackstone, K. B. (1989). Beating Texas' economic curve. Morning News. Dallas, TX.

Brookover, W., Beady, C., Blood, P., Schweitzer, J., & Wisenbaker, J. (1979). School social systems and student achievement. New York: Praeger.

Brookover, W. B., & Lezotte, L. W. (1979). Changes in school characteristics coincident with changes in student achievement. East Lansing, MI: Michigan State University, Institute For Research on Teaching. (ERIC Document Reproduction Service No. Ed 181 005).

Chavkin, N. F., & Williams, Jr., D. L. (1985). Parent Involvement in education project: Executive summary of the final report. Austin, TX. Southwest Educational Development Laboratory.

Center for Research and Public Policy. (1988). Indicators of Educational Quality Among Arkansas School Districts: 1983-1988. Little Rock, AR: University of Arkansas.

David, J. L. (1987). Improving education with locally developed indicators. Santa Monica, CA: Center for Policy Research in Education, Rutgers University/Rand Corporation/ University of Wisconsin-Madison.

Edmonds, R. R. (1979). Effective schools for the urban poor. Educational Leadership, 37(2), 15-18, 20-24.

Fullan, M. (1985). Change processes and strategies at the local level. The Elementary School Journal, 85 (3), 391-422.

Guskey, T. R. (1986). Staff development and the process of teacher change. Educational Researcher, 15(5), 5-12.

Hall, G. E., & Hord, S. M. (1987). Change in schools: Facilitating the process. Ithaca: State University of New York Press.

Hersey, P., & Blanchard, K. H. (1982). Management of organizational behavior (4th ed.). Englewood Cliffs, NJ; Prentice-Hall.

Huberman, A. M., & Miles, M. B. (1986). Rethinking the quest for school improvement: Some findings from the DESSI study. Teachers college Press. Teachers College, Columbia University New York and London. pp.61.

Johnstone, J. N. (1981). Indicators of Educational Systems. Paris: UNESCO.

Kaagan, S., & Smith, M. S. (1985). Indicators of educational quality. Educational Leadership, 43(2), 21-24.

Legislature passes new law to prepare students for success in 21st century. (1989). Oklahoma Educator.

Levine, C., & Stark, J. (1981). Instructional and organizational arrangements and processes for improving academic achievement at inner-city elementary schools. Kansas City, MO: University of Missouri-Kansas City, School of Education.

Lieberman, A., & Miller, L. (1986). School improvement: Themes and variations. Teachers College Press. Teachers College, Columbia University New York and London. pp. 96.

Louisiana Department of Education, Office of Reform Coordination: Management and Oversight (1989). Louisiana education reform initiatives from the first day on. Baton Rouge: Louisiana Board of Elementary and Secondary Education & Louisiana Department of Education.

Market Research and Issues Management, Inc. (1989). Final report. Louisiana education status. Baton Rouge, LA.

National Center for Education Statistics (1985). Indicators of Education Status and Trends. Washington, DC: U.S. Department of Education.

New York State Department of Education, Division of Education Evaluation (1974-1976). Reading achievement related to educational and environmental conditions in 12 New York city elementary schools. Albany, NY: The State Education Department.

Oklahoma State Senate. (1989). Major legislative actions relating to education, 1989 regular session, Part one: Schools. Oklahoma City: State Capitol.

Noto, J. J. (1986). Interactive research and development: Partners in craft. Teachers College Press. Teachers College, Columbia University New York and London. pp. 176.

Oakes, J. (1986). Educational indicators: A guide for policymakers. Santa Monica, CA: Center for Policy Research in Education, Rutgers University/RAND Corportion/ University of Wisconsin-Madison.

Oakes, J. (1989). What educational indicators? The case for assessing the school context. Educational Evaluation and Policy Analysis, 11(2), 181-199.

Ortiz, F. I. (1986). A comparison of leadership styles and organizational cultures. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Purkey, S. C., & Smith, M. S. (1982). Effective schools - a review. Paper presented at NIE conference on Implications of Research on Teaching.

Root, P. (1989). School improvement in Arkansas: Perspectives in educational administration, 1(2) pp. 1-3. University of Central Arkanasas College of Education.

Rutter, M., Maughan, B., Mortimore, P., Ouston, J., & Smith, A. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Cambridge, MA: Havard University Press.

Seldon, R. (1987). What measures are needed? The School Administrator, 44(11), pp. 8-11.

Seldon, R. (1988). Missing data: A progress report from the states. Phi Delta Kappan, 69(7), pp. 492-494.

Shavelson, R. J., McDonnel, L. & Oakes, J. (eds.) (1989). Indicators for monitoring Mathematics and Science Education. National Science Foundation, Santa Monica, CA: RAND.

Smith, M. (1988). "Educational indicators," Phi Delta Kappan, 69(7)

Texas Education Agency (1987). 1986-1990 Long-Range Plan of the State Board of Education for Texas Public School Education. Austin, TX.

Travers, R. M. W. (1983). How research has changed American schools: A history from 1840 to the present. Kalamazoo, MI: Mythos Press.

Trismen, D., Waller, M., & Wilder, G. (1976). A descriptive and analytic study of compensatory reading programs: Final report (Vol. 1, Addendum 1). Princeton, NJ: Educational Testing Service. (ERIC Document Reproduction Service No. ED 130-258).

Vaughan, M., Boethel, M., Hoover, W., Lawson, G., & Torres, M. E. (1989). Conditions and needs of rural education in the southwest region. Southwest Educational Development Laboratory: Austin, TX.

Venezky, R. L., & Winfield, L. F. (1979). Schools that succeed beyond expectations in teaching. Newark, DE: University of Delaware, Studies in Education (Technical Report. No. 1).

Warren, D. R. (1974). To enforce education: A history of the founding years of the United States Office of Education. Detroit: Wayne State University Press.

Weber, G. (1971). Inner city children can be taught to read: Four successful schools (Occasional Paper #18). Washington, DC: Council for Basic Education.

Wu, P. C. (1988). Why is change difficult? Lessons for staff development. The Journal of Staff Development, 9(2), 10-15.